

From the 22d to the 28th the general weather conditions were not far from normal, and a number of reports were received from widely scattered positions in the steamer lanes denoting more or less heavy weather at different times during that period.

On the 29th St. Johns, Newfoundland, was the center of a low (see Chart XII) that afterwards developed into an unusually severe disturbance, as shown on Charts XIII and XIV for October 30 and 31, respectively. The observer on the Norwegian S. S. *Harald* stated in the storm log: "Gale began on the 29th. Lowest barometer, 28.98 inches at 2 p. m. on the 29th; position 47° 53' N., 50° 00' W. End of gale on the 31st; highest force of wind 12." The observer on the British S. S. *Regina* reports as follows: "Gale began on the 29th. Lowest barometer 29.00 inches at 8 a. m. on the 30th; position 46° 14' N., 44° 00' W. End of gale on the 31st; highest force of wind, 10." On the 30th the storm area extended from the coast of Newfoundland to the thirtieth meridian, and from the thirty-ninth to the fiftieth parallels. By the 31st this area had contracted somewhat, although very heavy northwest gales accompanied by rain and snow were reported from a limited region in the southwest quadrant of the low, which was on that day central near latitude 51°, longitude 42°.

Fog was apparently unusually rare during the month, as in only one 5-degree square was it reported on more than one day.

NOTES ON WEATHER IN OTHER PARTS OF THE WORLD.

BRITISH ISLES.

One of the chief features (one might perhaps describe it as the ruling factor) in the weather of a very remarkable month, was the almost complete absence of the mild and humid southwesterly winds which prevail with so much energy in an ordinary October. * * *

The general rainfall expressed as a percentage of the average was: England and Wales, 59; Scotland, 57;

Ireland, 42; British Isles, 55. Taken generally the month was probably one of the driest Octobers of which there is any record.¹

In London (Camden Square) the month was dull and cold. The rainfall was the lowest for October in the 62 years' record with the single exception of October, 1897. Mean temperature, 45.7°, or 4.4° below the average, and the lowest for October since 1892.—*Symons's Meteorological Mag.*, London, Nov., 1919, p. 121.

HEAT WAVE DECREASES WINE PRODUCTION IN MADEIRA.

[Consul W. L. Jenkins, Funchal, Madeira, Sept. 27, 1919.]

In the middle of August the estimate for this year's wine production in Madeira was 11,000 pipes, or 1,452,000 gallons. From August 21 to 28, however, the island was almost "smothered" by what is locally called a "Leste." This means a wind from the east, which, coming as it does from the Sahara Desert, is extremely warm and is often accompanied by small particles of sand. During this period the minimum temperature in the shade was 70° F. and the maximum 101°. The temperature in the sun was as high as 135°. The grapes dried up rapidly, and although many of them were just about ready to be picked at that time, present estimates place this year's wine production at only 7,000 pipes, or 924,000 gallons, representing a depreciation of nearly 40 per cent on the previous estimate.—*Commerce Reports* 718, Nov. 5, 1919.

FLOODS IN EASTERN SPAIN.

According to statements in the *Times*, London, of October 2 and 4, 1919, heavy floods have occurred throughout eastern Spain following abnormal rainfall and hail. In Valencia it is stated the ricefields were inundated to a depth of many feet and the harvest ruined. The damage caused by the water is estimated to exceed \$2,000,000, and over 100 people have been drowned. Thirty villages and the port of Cartagena were isolated and it was necessary to send a Spanish warship with provisions and military engineers to Cartagena where the road and rail communications were cut.—*Quart. Jour. Roy. Met'l Soc.*, London, Oct., 1919, p. 352.

¹ Cf. *Nature* (London), Nov. 20, 1919, p. —.

DETAILS OF WEATHER OF THE UNITED STATES.

CYCLONES AND ANTICYCLONES.

By A. J. HENRY.

Cyclones.—Eight principal and a number of secondary cyclones have been plotted on Chart III. The great majority of the cyclones appeared as rather ill-defined barometric depressions over the Canadian Northwest, only two of which, however, can be clearly traced across the continent. As a result cyclonic control of the weather was pronounced in the Northwest, but not elsewhere, probably by reason of the extension of high pressure over southeastern United States.

Anticyclones.—Twelve anticyclones, eight of which appeared in the Canadian Northwest and four on the Pacific coast, have been plotted on Chart II. Seven reached the Atlantic and the remainder dissipated over the continent. No anticyclone penetrated below the 37th parallel. It is interesting to note that none of the North Pacific anticyclones passed across the continent except in a single instance and that was probably due to merging with an Alberta anticyclone in the lower lake region. The dominant control of the weather during the month was anticyclonic except below the 37th parallel.

THE WEATHER ELEMENTS.

By P. C. DAY, Climatologist and Chief of Division.

[Dated: Weather Bureau, Washington, Dec. 1, 1919.]

PRESSURE AND WINDS.

The distribution of the mean atmospheric pressure over the United States and Canada, and the prevailing direction of the winds for October, 1919, are graphically shown on Chart VII, while the means at the several stations, with the departures from the normal, are shown in Tables I and III.

PRESSURE.

The first few days of the month were without notable pressure variations save that barometer readings were generally higher than average over both the Atlantic and Pacific coast districts, and below average in the interior portions of the country. Near the end of the first decade, however, pressure had risen to well above normal over New England and the Canadian Maritime Provinces, had fallen decidedly in the Middle West and was high and rising in the Canadian Northwest.